



Missouri Department of Health and Senior Services

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## **Bordetella Pertussis Collection Guidelines**

**Revision 01/31/05**

### **Testing**

To effectively evaluate the immunizing efforts against Whooping Cough it is necessary to confirm as many reported cases as possible and to differentiate between *B. pertussis* and *B. parapertussis*, since clinical separation is uncertain.

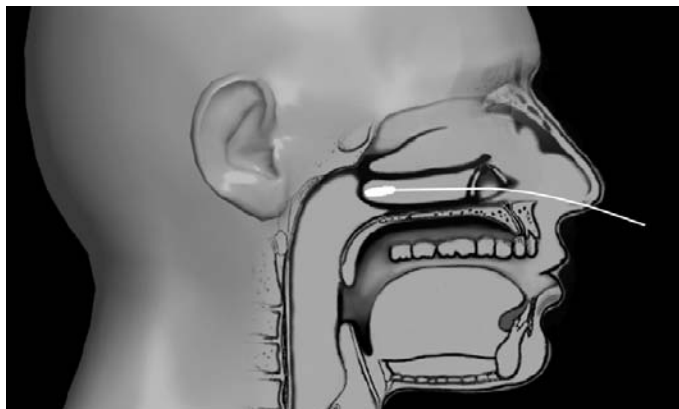
The natural habitat of *Bordetella pertussis* and *Bordetella parapertussis* is the ciliated epithelial cells of the respiratory tract. Recovery of these organisms is highest during the first three weeks of infection if the specimen is collected and inoculated properly, but the percentage of positive cultures steadily declines with time. Antibiotic treatment affects the rate of isolation even during the acute stage of infection. These organisms are difficult to isolate after 48 hours of antibiotic administration.

We have a simple specimen collection kit for PCR and culture. Close adherence to the directions for specimen collection and transport will greatly enhance this laboratory's capability to provide an accurate result.

Because *B. pertussis* is a reportable disease, your local Health Department will be notified of positive laboratory results and will provide assistance in investigation, follow-up and outbreak control.

### **Method of Collection**

1. Label both the saline tube and the Regan-Lowe transport tube with the patient's name or an identifier. The specimens **MUST** be labeled. If the specimens are not labeled they **WILL** be discarded without testing. Please make sure the transport media has not expired.
2. To take the specimen, immobilize the patient's head and gently pass the swab through the nostril into the nasopharynx, rotating the swab for a few seconds before being withdrawn. Please use the Dacron swabs supplied in the kit. **DO NOT USE COTTON SWABS!**



### IT IS NECESSARY TO OBTAIN TWO SPECIMENS FOR TESTING

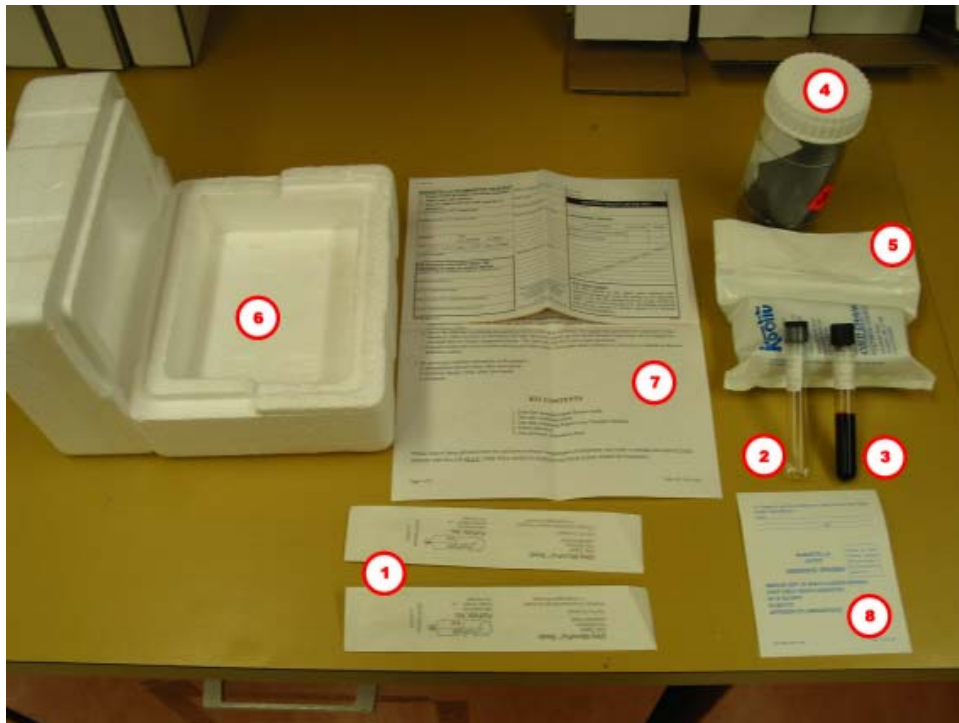
3. Take the first specimen and immediately place the swab in the tube containing the semisolid transport media. Cut off the excess shaft with a pair of scissors and put the cap on tight. Take the second specimen and immediately emulsify the swab in the tube containing sterile saline. Be sure to immerse the swab completely in the media. Again cut off the excess shaft with a pair of scissors and put the cap on tight.



4. Published studies indicate better recovery of *Bordetella pertussis* if the media is shipped cold to the laboratory. Therefore, the mailer contains freeze pillow(s) to be used during shipping.
  - a. Please hold inoculated transport medium and saline in refrigerator until ready to package and ship. When ready to ship: pack inoculated transport medium and saline into the plastic container and tighten lid. Place that container with the frozen freeze pillow(s) in Styrofoam mailer.
  - b. Due to the difficulty in culturing *Bordetella pertussis* under ideal conditions, we suggest that specimens be transported to the laboratory within 24 hours. If convenient, the state laboratory courier service can be utilized or specimens can be shipped for overnight delivery using a commercial carrier. The State Lab will NOT pay to mail specimens.
  - c. Transport media that is not received cold may give false results. Even under ideal conditions *B. pertussis* is so fastidious that it is difficult to culture.
5. Be sure to give complete information on the patient's:
  - a. Immunization Record (what, when, how much)
  - b. Antibiotic therapy (what, when, how much)
  - c. Symptoms

## KIT CONTENTS

1. Extra fine nasopharyngeal Dacron swabs
2. One tube containing saline
3. One tube containing Regan-Lowe Transport Medium
4. Plastic container for tubes
5. Freeze Pillow(s) \*
6. Styrofoam shipping container
7. One specimen information form
8. Shipping Label



**\*Please remove freeze pillow(s) from box and store in freezer compartment of refrigerator until ready to package and mail (PLEASE FREEZE THE PILLOW FLAT THIS WILL MAKE IT EASIER FOR PACKAGING WHEN RETURNING).**

**PLEASE NOTE: The shipper is responsible for being sure that their package is in compliance with current regulations.**